

Amendment

Applicants: SRIENC et al.

Serial No.: 10/090,965

Filed: March 4, 2002

For: PRODUCTION OF POLYHYDROXYALKANOATES**Amendments to the Claims**

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. (original) A method for the production of a polyhydroxyalkanoate (PHA) comprising:
providing a transgenic yeast cell comprising a first nucleic acid fragment comprising a heterologous nucleotide sequence encoding a PHA polymerase and at least one second nucleic acid fragment comprising a heterologous nucleotide sequence selected from the group consisting of a heterologous nucleotide sequence encoding an acetoacetyl-CoA reductase and a heterologous nucleotide sequence encoding a β -ketothiolase;
culturing the transgenic yeast cell under anaerobic conditions to cause the production of PHA; and
isolating the PHA from the yeast cell.
2. (original) The method of claim 1 wherein the first and second nucleic acid fragments constitute a single nucleic acid fragment.
3. (original) The method of claim 2 wherein the single nucleic acid fragment comprises a divergent promoter operably linked to two of the heterologous nucleotide sequences.
4. (original) The method of claim 1 wherein the yeast cell comprises a second nucleic acid fragment comprising a heterologous nucleotide sequence encoding an acetoacetyl-CoA reductase and a third nucleic acid fragment comprising a nucleotide sequence encoding a β -ketothiolase.
5. (original) The method of claim 4 wherein at least two of the first, second and third nucleic acid fragments constitute a single nucleic acid fragment.

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6. (original) The method of claim 5 wherein the single nucleic acid fragment comprises a divergent promoter operably linked to two of the heterologous nucleotide sequences.
7. (original) The method of claim 1 wherein at least one nucleic acid fragment is integrated into the genome of the yeast cell.
8. (original) The method of claim 1 further comprising introducing at least one nucleic acid fragment into the yeast cell to yield the transgenic yeast cell.
9. (original) The method of claim 1 wherein the yeast cell is a cell from the genus *Saccharomyces*.
10. (original) The method of claim 1 wherein the yeast cell is an *S. cerevisiae* cell.
11. (original) The method of claim 1 wherein the yeast cell is a cell from the genus *Kluyveromyces*.
12. (original) The method of claim 1 wherein the PHA polymerase comprises a PHA_{SCL} polymerase.
13. (original) The method of claim 1 wherein the PHA polymerase comprises a PHA_{MCL} polymerase.
14. - 94. (canceled)